

WE CLAIM:

- 1 1. A method for identifying a compound that modulates cellular
2 proliferation, the method comprising the steps of:
3 (i) contacting the compound with a peptide 35, 38, 40, or 41 binding
4 partner; and
5 (ii) determining the functional effect of the compound upon the binding
6 partner polypeptide.
- 1 2. The method of claim 1, wherein the functional effect is measured
2 *in vitro*.
- 1 3. The method of claim 2, wherein the functional effect is a physical
2 effect.
- 1 4. The method of claim 3, wherein the functional effect is determined
2 by measuring ligand binding to the binding partner polypeptide.
- 1 5. The method of claim 2, wherein the functional effect is a chemical
2 effect.
- 1 6. The method of claim 1, wherein the binding partner polypeptide is
2 expressed in a eukaryotic host cell or cell membrane.
- 1 7. The method of claim 6, wherein the functional effect is a physical
2 effect.
- 1 8. The method of claim 7, wherein the functional effect is determined
2 by measuring ligand binding to the binding partner polypeptide.
- 1 9. The method of claim 6, wherein the functional effect is a chemical
2 or phenotypic effect.
- 1 10. The method of claim 9, wherein the chemical or phenotypic effect
2 is determined by measuring cellular proliferation.
- 1 11. The method of claim 10, wherein the cellular proliferation is
2 measured by assaying for DNA synthesis or fluorescent marker dilution.

1 12. The method of claim 11, wherein DNA synthesis is measured by
2 ³H thymidine incorporation, BrdU incorporation, or Hoescht staining.

1 13. The method of claim 11, wherein the fluorescent marker is selected
2 from the group consisting of a cell tracker dye or green fluorescent protein.

1 14. The method of claim 1, wherein modulation is inhibition of cellular
2 proliferation.

1 15. The method of claim 1, wherein modulation is inhibition of cancer
2 cell proliferation.

1 16. The method of claim 6, wherein the host cell is a cancer cell.

1 17. The method of claim 16, wherein the cancer cell is a breast,
2 prostate, colon, or lung cancer cell.

1 18. The method of claim 16, wherein the cancer cell is a transformed
2 cell line.

1 19. The method of claim 18, wherein the transformed cell line is A549.

1 20. The method of claim 16, wherein the cancer cell is p53 null or
2 mutant.

1 21. The method of claim 16, wherein the cancer cell is p53 wild-type.

1 22. The method of claim 1, wherein the polypeptide is recombinant.

1 23. The method of claim 1, wherein the compound is an antibody.

1 24. The method of claim 1, wherein the compound is an antisense
2 molecule.

1 25. The method of claim 1, wherein the compound is a small organic
2 molecule.

1 26. The method of claim 1, wherein the compound is a peptide.

- 1 27. The method of claim 26, wherein the peptide is circular.
- 1 28. A method of modulating cellular proliferation in a subject, the
2 method comprising the step of administering to the subject a therapeutically effective
3 amount of a compound identified using the method of claim 1.
- 1 29. The method of claim 28, wherein the subject is a human.
- 1 30. The method of claim 29, wherein the subject has cancer.
- 1 31. The method of claim 28, wherein the compound is an antibody.
- 1 32. The method of claim 28, wherein the compound is an antisense
2 molecule.
- 1 33. The method of claim 28, wherein the compound is a small organic
2 molecule.
- 1 34. The method of claim 28, wherein the compound is a peptide.
- 1 35. The method of claim 34, wherein the peptide is circular.
- 1 36. The method of claim 28, wherein the compound inhibits cancer cell
2 proliferation.
- 1 37. A peptide comprising peptide 35, 38, 40, or 41.